REMARKS/ARGUMENTS

1.) Claim Amendments

The Applicants have amended claims 1, 11, 12, 16, and 18; claims 19 and 20 were previously canceled; and claims 21-23 have been added. Accordingly, claims 1-18 and 21-23 are pending in the application. Favorable reconsideration of the application is respectfully requested in view of the foregoing amendments and the following remarks.

2.) Claim Rejections – 35 U.S.C. § 102(e)

In paragraphs 5-6 of the Office Action, the Examiner rejected claims 1-8, 11-12, 16 and 18 under 35 U.S.C. § 102(e) as being anticipated by Jin, et al. (US 6,917,617). Of these claims, the Applicants have canceled claims 11, 12, and 18. The Applicants have amended the remaining claims to better distinguish the claimed invention from Jin. The Examiner's consideration of the amended claims is respectfully requested.

Jin receives packets on the IP layer, receives QoS information (possibly on a different layer although this does not relate to the claimed invention), and forwards the packets on the IP layer, i.e., on the same layer on which they are received. The QoS information is also applied on the IP layer by the interior nodes when routing the packets. Lower layers are not considered. With reference to FIG. 2a of the present application, it is noted that everything disclosed in Jin happens on the IP layer in the network (FS) on the right-hand side of the figure. In Jin, an underlying layer in the protocol stack may drop data packets regardless of an associated PDP context. This is particularly a problem in those nodes that are not adapted to evaluate higher layers in the protocol stack. Such interior nodes would not consider settings on the higher IP layer as taught by Jin.

In the Applicant's invention, on the other hand, packets are received in the edge node EN2 on layer LA (for example the IP layer), QoS information is received (does not matter how), and the packets are then encapsulated into a lower layer packet on layer

LR. Thus, the QoS information is applied on the lower layer and NOT on the layer on which the original packet is received.

It is further noted that Jin's solution does not work in intermediate nodes in which the higher layers are not considered.

Claim 1 has been amended to recite that the edge node receives an incoming data packet on a first protocol layer, sets a data field specifying the handling of the packet according to quality parameters from the user's subscription, and encapsulates the packet and the data field into a data packet on a lower layer for the routing of the data packet. Furthermore, the interior nodes evaluate the data field at the lower layer and route the packets according to the quality parameters specified in the data field. Applicant submits that these features are not taught or suggested by Jin. Therefore, the allowance of amended claim 1 is respectfully requested.

Claims 2-8 depend from amended claim 1 and recite further limitations in combination with the novel and unobvious elements of claim 1. Therefore, the allowance of claims 2-8 is respectfully requested.

Claim 11 is an independent claim for an edge node in a packet switched communication system. Claim 11 has been amended similarly to claim 1 to recite that the edge node receives an incoming data packet on a first protocol layer, sets a data field specifying the handling of the packet according to quality parameters from the user's subscription, and encapsulates the packet and the data field into a data packet on a lower layer for the routing of the data packet. The allowance of claim 11 is respectfully requested for the same reasons discussed above for claim 1.

Claim 12 depends from amended claim 11 and recites further limitations in combination with the novel and unobvious elements of claim 11. Therefore, the allowance of claim 12 is respectfully requested.

Claim 16 is an independent claim for an interior node in a packet switched core network. Claim 16 has been amended to recite that the interior node includes means for determining whether the interior node has sufficient resources to handle a received data packet utilizing a highest quality of service level. The node also includes means for forwarding the received data packets utilizing the highest quality of service level without evaluating the unspecified bits in the differentiated services data field,

responsive to a determination that the interior node has sufficient resources to handle the received data packet utilizing the highest quality of service level. The node also includes means for evaluating the unspecified bits in the differentiated services data field and forwarding the packets according to the unspecified bits, responsive to a determination that the interior node does not have sufficient resources to handle the received data packet utilizing the highest quality of service level.

The Applicant contends these features are not taught or suggested by Jin. Basis for the amendment of claim 16 is found in the originally filed specification on page 9, line 26 through page 10, line 3. Therefore, the allowance of amended claim 16 is respectfully requested.

Claim 18 is an independent claim for a program unit on a data carrier or loadable into an edge node in a packet switched communication system. Claim 18 has been amended similarly to claim 1 to recite that the edge node receives an incoming data packet on a first protocol layer, sets a data field specifying the handling of the packet according to quality parameters from the user's subscription, and encapsulates the packet and the data field into a data packet on a lower layer for the routing of the data packet. The allowance of claim 18 is respectfully requested for the same reasons discussed above for claim 1.

3.) Claim Rejections – 35 U.S.C. § 103(a)

In paragraphs 7-9 of the Office Action, the Examiner rejected claim 9 under 35 U.S.C. § 103(a) as being unpatentable over Jin in view of "Mobile IP and Wide Area Wireless Data" by LaPorta, et al. (La Porta).

Claim 9 depends from amended claim 1 and recites further limitations in combination with the novel and unobvious elements of claim 1. The limitations added to claim 1, as discussed above, are also not taught or suggested by LaPorta. Therefore, the allowance of claim 9 is respectfully requested.

In paragraph 10 of the Office Action, the Examiner rejected claims 10 and 17 under 35 U.S.C. § 103(a) as being unpatentable over Jin in view of RFC 2475 "Architecture for Differentiated Services" by Blake, et al. (Blake).

Claim 10 depends from amended claim 1 and recites further limitations in combination with the novel and unobvious elements of claim 1. The Examiner points to Section 2.3.3.1 of Blake for suggesting the use of a threshold in that an action is triggered based on whether a packet is in- or out-of-profile. Applicant submits, however, that the limitation added to base claim 1 is not disclosed or suggested by either Jin or Blake. Therefore, the allowance of claim 10 is respectfully requested.

Claim 17 depends from amended claim 16 and recites further limitations in combination with the novel and unobvious elements of claim 16. The Applicant submits that claim 17 is allowable for the reasons discussed above for claim 16. Furthermore, the Examiner points to Section 2.3.3.1 of Blake for suggesting the use of a threshold in that an action is triggered based on whether a packet is in- or out-of-profile. However, by necessity, Blake requires that the data field in the packet specifying the quality of service be evaluated before a determination can be made as to whether the packet is in- or out-of-profile. Base claim 16 specifically states that if the node has sufficient resources to handle a received data packet utilizing a highest quality of service level, the node forwards the data packet utilizing the highest quality of service level *without evaluating the data field in the data packet specifying the handling of the packet.* This feature reduces computational time required by Blake that does not provide any additional benefit. This feature is not taught or suggested by Jin or Blake. Therefore, the allowance of claim 17 is respectfully requested.

In paragraph 11 of the Office Action, the Examiner rejected claims 13-15 under 35 U.S.C. § 103(a) as being unpatentable over Jin in view of Mustajarvi, et al. (US 6,661,782). The Examiner cited Mustajarvi for disclosing a network with an HLR as a subscriber database, an SGSN as an edge node, and a radio controller (BSC) as an edge node.

Claims 13-15 depend from amended claim 11 and recite further limitations in combination with the novel and unobvious elements of claim 11. The Applicant submits that the combination of Jin and Mustajarvi does not disclose or suggest the invention recited in amended base claim 11. Therefore, the allowance of claims 13-15 is respectfully requested.

4.) New Claims

Claims 21-23 have been added.

Claim 21 recites several steps performed within the interior nodes in the network that are not taught or suggested by Jin, LaPorta, Blake, or Mustajarvi. In particular, each interior node determines whether the interior node has sufficient resources to handle a received data packet utilizing a highest quality of service level. If so, the interior node forwards the received data packet utilizing the highest quality of service level without evaluating the data field in the data packet specifying the handling of the packet. If the interior node does not have sufficient resources, the node evaluates the data field in the data packet specifying the handling of the packet, and forwards the evaluated data packet by performing a differentiated handling of the packets according to the data field set by the edge node.

The Examiner points to Section 2.3.3.1 of Blake for suggesting the use of a threshold in that an action is triggered based on whether a packet is in- or out-of-profile. However, by necessity, Blake requires that the data field in the packet specifying the quality of service be evaluated before a determination can be made as to whether the packet is in- or out-of-profile. Claim 21 specifically states that if the node has sufficient resources to handle a received data packet utilizing a highest quality of service level, the node forwards the data packet utilizing the highest quality of service level *without evaluating the data field in the data packet specifying the handling of the packet.* This feature reduces computational time required by Blake that does not provide any additional benefit. This feature is not taught or suggested by any of the cited references.

Basis for new claim 21 is found in the originally filed specification on page 9, line 26 through page 10, line 3. Therefore, the allowance of new claim 21 is respectfully requested.

New claims 22 and 23 recite an interior node and a system, respectively, that include the new feature added in claim 21. Therefore, the allowance of claims 22 and 23 is respectfully requested for the same reasons.

CONCLUSION

In view of the foregoing remarks, the Applicants believe all of the claims currently pending in the Application to be in a condition for allowance. The Applicants, therefore, respectfully request that the Examiner withdraw all rejections and issue a Notice of Allowance for claims 1-18 and 21-23.

The Applicants request a telephonic interview if the Examiner has any questions or requires any additional information that would further or expedite the prosecution of the Application.

Respectfully submitted,

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